

Chapter 7

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I. INTRODUCTION

First adopted by the County Board of Supervisors (BOS) in 1974, the Noise Element sets the goals and policy direction for the management of noise in Los Angeles County. California planning law obligates the County to prepare a noise element that identifies and appraises noise issues in the County's unincorporated communities. The purpose of the Noise Element is to limit the exposure of the general public to excessive noise levels. This Element includes:

- A general discussion of noise and the noise environment of the County;
- A discussion of how noise affects the residents and businesses of the County;
- The regulations and noise standards for the County; and,
- The goals and policies to regulate and mitigate noise concerns.

II. DEFINING AND MEASURING NOISE

Unacceptable noise levels have a significant impact on the overall quality of life in the unincorporated areas of Los Angeles County. As a public policy issue, excessive levels of noise result in increased neighborhood annoyance, dissatisfaction, and declining property values. Due to the County's geographic, environmental, and cultural diversity, the levels and types of noise issues vary significantly throughout the County.

The Noise Environment

The typical community noise environment is made up of background or "ambient" noise and other higher, "intrusive" levels of noise. These levels frequently emanate from

what are considered to be the major sources of noise. In unincorporated areas of the County the major sources of noise come from the various transportation systems that operate throughout the County; commercial and private airports, the Los Angeles County Metropolitan Transportation Authority's (Metro) rail and bus networks, and the extensive freeway and highway system of the region. Other major sources of noise have historically been identified with industrial uses, such as manufacturing plants, and barking dogs

Noise Measurement

Sound and noise are often described in qualitative terms, and individuals differ greatly on what noises are considered pleasant or annoying. Therefore, putting quantitative measurements on noise effects is quite technical. Basic levels of noise measurement referred to in this Element include:

- **Decibels (dB):** Refers to the strength of a sound as dependent on the pressure exerted by sound waves (in other words, the greater the pressure, the louder the sound);
- **Frequency:** Refers to sounds that are produced by rapidly or slow vibrating objects;
- **"Community Noise Equivalent Level" (CNEL):** Provides a range of measurement for community noise levels that range from 30 decibels (very quiet) to 100 decibels (very loud); and,
- **"Day-Night Average Level" (DNL):** Refers to the aggregate of numerous single noise events to generate an average or composite sound level.

Effects of Noise on People

Excessive noise can pose a serious public health problem and is one of the most widespread environmental pollutants affecting County communities. **Table 7.1** lists disturbances

from excessive noise that range from minor sleep annoyance to potential hearing loss. Sensitive receptors to noise, such as children or the elderly, are at particularly high risk of being affected by excessive noise levels. The County recognizes the importance of alleviating noise for public health purposes, and the General Plan Noise Element creates a framework to reduce or prevent excessive levels of noise for all residents in the County.

III. REGULATORY FRAMEWORK

Noise Level Standards

All levels of government have responsibilities for exercising control to mitigate the annoyances caused by noise. The following section outlines the noise level standards set by federal, state, and County regulations.

Federal Regulations

The adverse impact of noise was officially recognized by the federal government in the Noise Control Act of 1972, which serves three purposes:

1. Promulgating noise emission standards for interstate commerce;
2. Assisting state and local abatement efforts; and,
3. Promoting noise education and research.

The Federal Office of Noise Abatement and Control (ONAC) was initially tasked with implementing the Noise Control Act. However, the ONAC has since been eliminated, leaving the development of federal noise policies and programs to other federal agencies and interagency committees. For example, the Occupational Safety and Health Administration (OSHA) agency prohibits exposure of workers to excessive sound levels. The Department of Transportation (DOT) assumed a significant role in noise control through its various operating agencies, such as with the Federal Aviation Administration (FAA), which regulates noise generated by aircraft and airports. Surface transportation system noise

Table 7.1: Sources and Effects of Common Noise Levels

Decibels	Effects	Observation	Source
130	Hearing Loss	Pain Threshold	Hard Rock Band Thunder
120		Deafening	
110			Jet Take-Off
100			Loud Auto Horn at 10 ft.
90		Very loud	Noisy City Street
85			School Cafeteria
80			
75			
70	Physiological Effects	Loud	Vacuum Cleaner at 10 ft.
65			Normal Speech at 3 ft.
60	Interference with Speech		
55			
50	Sleep Interruption	Moderately Loud	Average Office Dishwasher in Next Room
45			Soft Radio Music Quiet Residential Area
40	Sleep Disturbance		
35		Average Whisper at 6 ft.	
30		Rustle of Leaves in Wind	
20		Very Faint	Human Breathing
10			
5			
0		Audibility Threshold	

Source: Compilation of scientific and academic literature, generated by FHWA and EPA

is regulated by a host of agencies, including the Federal Transit Administration (FTA), which requires that all rail systems receiving federal funding be constructed and operated in accordance with its regulations and specifications. The Federal Railroad Administration (FRA) sets forth and enforces safety standards, including noise emissions within railroad locomotive cabs. Transit noise is regulated by the federal Urban Mass Transit Administration (UMTA), while freeways that are a part of the interstate highway system are regulated by the Federal Highway Administration (FHWA). The FHWA has adopted and promulgated noise abatement criteria for highway construction projects. Finally, the federal government actively advocates that local jurisdictions use their land use regulatory authority to arrange new development in such a way that “noise sensitive” uses are either prohibited from being sited adjacent to a highway

or, alternately, that the developments are planned and constructed in such a manner that potential noise impacts are minimized.

Since the Federal government has pre-empted the setting of standards for noise levels that can be emitted by transportation sources, the County is restricted to regulating the noise generated by the transportation system through nuisance abatement ordinances and land use planning. These are discussed further under County Regulations.

State Regulations

One major identified source of excessive noise is airports. Title 21 of the California Code of Regulations establishes maximum acceptable levels of aircraft noise for persons living in the vicinity of airports. The maximum exposure level around airports that the State believes is compatible with residences, schools, hospitals, and places of worship is 65 dB CNEL. Noise contours for all public use airports within the County are found in **Figure 7.1**, and in the County's Airport Land Use Plan adopted by the Airport Land Use Commission (ALUC) in 1991, available on the Department of Regional Planning's website at <http://planning.lacounty.gov/spALUC.htm>.

Title 21 also requires each county in California with public use airports to establish an ALUC. The ALUC is mandated to fulfill two specific duties:

- To prepare airport land use plans for promoting and ensuring compatibility between each airport in a county and its surrounding and adjacent land uses; and,
- To review local agency land use actions and airport plans for consistency with the airport land use plan and policies.

In Los Angeles County, the Regional Planning Commission (RPC) serves as the ALUC and is responsible for protecting the health, safety, and welfare of the public. They do this by ensuring the orderly development of airports and the

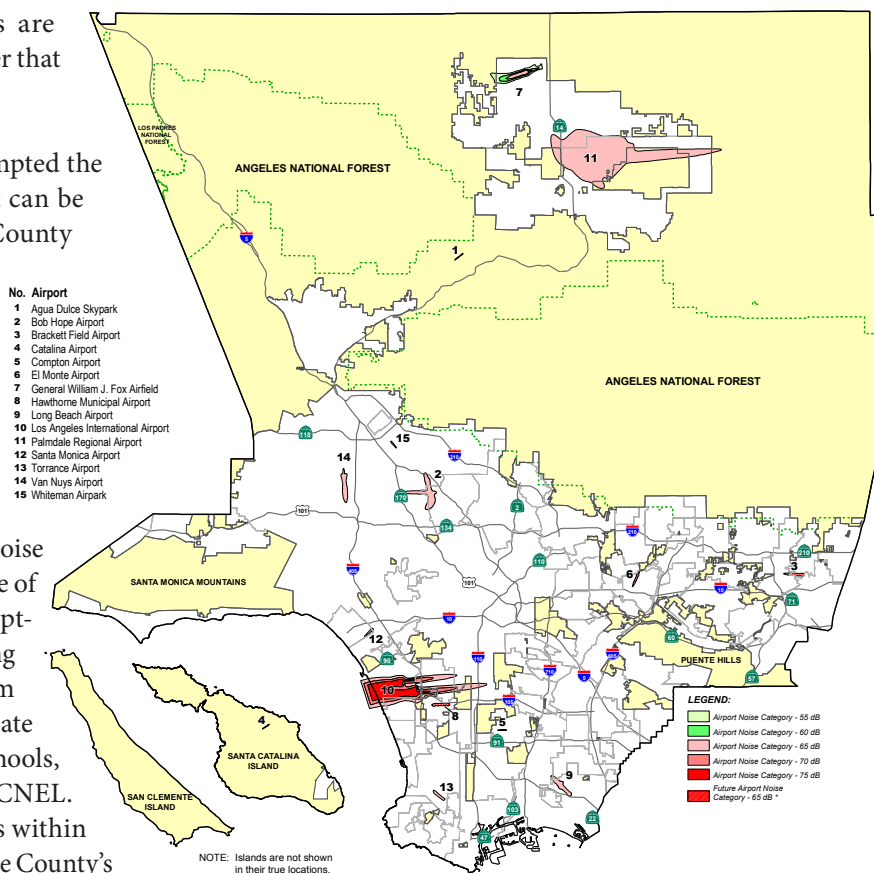


Figure 7.1: L.A. County Airport Noise Contours

adoption of land use measures that minimize the public's exposure to excessive noise and safety hazards within areas around public use airports.

The ALUC prepares the land use compatibility plan called the Comprehensive Land Use Plan (CLUP), which must include an evaluation of noise as a primary component. The County's 1991 CLUP contains 65dB CNEL noise exposure contours for each airport.

Additional state regulatory codes related to noise abatement include:

- **Uniform Building Code:** Title 24 of the California Code of Regulations requires certain noise insulation measures to be used in the design of all new residential construction other than detached, single-family dwellings;
- **Vehicle Code:** Establishes maximum noise levels for motor vehicles; and,
- **California Code of Regulations:** Establishes maximum acceptable levels of aircraft noise.

The California Department of Health Service's Office of Noise Control (ONC), established in 1973, was instrumental in developing regulatory tools to control and abate noise for use by local agencies. One significant model is the "Land Use Compatibility for Community Noise Environments Matrix", which allows a local jurisdiction to clearly delineate compatibility of sensitive uses with various incremental levels of noise. The County has adapted this State matrix to develop the County's exterior noise standards, as seen in **Table 7.2**.

County Regulations

The County is chiefly involved in maintaining the health and welfare of its residents in respect to noise through nuisance abatement ordinances and land use planning. The County Noise Control Ordinance, Title 12 of the County Code, was adopted by the Board of Supervisors in 1977 "...to control unnecessary, excessive, and annoying noise and vibration" It declared that County policy was to "...maintain quiet in those areas which exhibit low noise levels and to implement programs aimed at reducing noise in those areas within the county where noise levels are above acceptable values" (Section 12.08.010 of the County Code).

Table 7.2: L.A. County Exterior Noise Standards

Noise Zone	Designated Noise Zone Land Use (Receptor Property)	Time Interval	Exterior Noise Level (dB)
I	Noise-sensitive area, designated to ensure exceptional quiet	Anytime	45
II	Residential properties, zoned as such in the County Code Title 22	10:00 p.m. to 7:00 a.m. (nighttime)	45
		7:00 a.m. to 10:00 p.m. (daytime)	50
III	Commercial properties, zoned as such in the County Code Title 22	10:00 p.m. to 7:00 a.m. (nighttime)	55
		7:00 a.m. to 10:00 p.m. (daytime)	60
IV	Industrial properties, zoned as such in the County Code Title 22	Anytime	70

Source: Section 12.08.390 of L.A. County Code (a portion of the Noise Control Ordinance)

On August 14, 2001, the Board of Supervisors approved an ordinance amending Title 12 of the County Code to prohibit loud, unnecessary, and unusual noise that disturbs the peace and/or quiet of any neighborhood or which causes discomfort or annoyance to any reasonable person of normal sensitivity residing in the area. Regulations can include requirements for sound barriers, mitigation measures to reduce excessive noise, or the placement and orientation of buildings, and can specify the compatibility of different uses with varying noise levels, as shown in **Table 7.2**.



Airport Traffic, Lennox Community

In addition to the countywide noise ordinance, many communities address noise concerns in their individual area or community plans. For more information on these plans and their respective noise control measures, please refer to the Department of Regional Planning's (DRP) website under Land Use and Zoning Information at <http://planning.co.la.ca.us/luz.htm>.

Community Attitudes about Noise

The County has conducted two surveys to assess the subjective noise annoyance factor in unincorporated communities. In compliance with the County Noise Ordinance, the County Health Department's Environmental

Hygiene Program performed noise complaint assessments for a four-year period from 1996 through 1999. During this period, the Health Department responded to a total of 111 noise complaints under its statutory authority.

The Department of Regional Planning conducted General Plan Workshops around the County to discuss community concerns and generate feedback for the General Plan update process. The workshops revealed that in terms of noise, both urban and rural communities experience neighborhood disturbances such as barking dogs, leaf blowers, garbage trucks, buses, and motorcycles. Urban residential areas seemed to be affected by commercial and industrial spillover noise, such as trucks making late night deliveries at neighborhood shopping centers. Virtually all communities objected to noise generated by freeways and major arterials. All communities also reacted to aircraft noise to some extent, with the strongest reaction from those whose homes and businesses lie beneath the flight path of major airports. The General Plan Noise Element incorporated the feedback from these various “Issue Workshops”, and used them in formulating the County’s goals and policies on noise regulation.

IV. GOALS, POLICIES AND IMPLEMENTATION ACTIONS

The goals and policies which apply to noise regulation are:

Goal N-1

An environment that is protected from unacceptable levels of noise.

- **Policy N 1.1:** Ensure the compatibility of land uses throughout the County to minimize the exposure to excessive noise levels.
- **Policy N 1.2:** Employ effective noise abatement measures to achieve acceptable levels of noise as defined by the Los Angeles County Exterior Noise Standards.
- **Policy N 1.3:** Ensure cumulative impacts related to noise do not exceed excessive levels.

Implementation Action N 1.1

Identify significant noise issues in the County and create a working project list. Examples will include the need for sound walls and noise barriers, buffering, etc. This list can be used to identify funding sources and for grant applications.